Grade 3 Math
Subclaim: Reasoning

The standard designation is included preceding each evidence statement.
Evidence Statements may:
1. Use exact standard language
2. Be derived by focusing on specific parts of a standard
3. Be integrative - the testing of more than one of the standards on a single item/task without going beyond the standards to create new requirements

Evidence Statements	Clarifications	Relationship to Mathematical Practices
Reasoning (C)		
3.C.1-1 Base explanations/reasoning on the properties of operations. Content Scope: Knowledge and skills articulated in 3.OA.5	●Students need not use technical terms such as commutative, associative, distributive, or property. ●Products and related quotients are limited to the 10x10 multiplication table ●These tasks may not exceed the content limits of grade 3. For example, 2 x 4 x 5, would be acceptable as students can use the associative property to rewrite the expression as 8 x 5 which falls within the content limits of grade 3. The problem 7 x 4 x 5 would exceed the content limits of grade 3 because any use of the associative property would result in a 2-digit multiplier.	MP.3, MP.6, MP.7
3.C.1-2 Base explanations/reasoning on the properties of operations. Content Scope: Knowledge and skills articulated in 3.OA.9	●Students need not use technical terms such as commutative, associative, distributive, or property.	MP.3, MP.6, MP.7, MP.8
3.C.1-3 Base explanations/reasoning on the properties of operations. Content Scope: Knowledge and skills articulated in 3.MD.7	●Tasks may include those with and without real-world contexts. ●Students need not use technical terms such as commutative, associative, distributive, or property.	MP.3, MP.5, MP.6, MP.7
3.C.2 Base explanations/reasoning on the relationship between multiplication and division. Content Scope: Knowledge and skills articulated in 3.OA.6	Products and related quotients are limited to the 10 x 10 multiplication table.	MP.3, MP.6, MP.7

3.C.3-1 Base arithmetic explanations/reasoning on concrete referents such as diagrams (whether provided in the prompt or constructed by the student in her response), connecting the diagrams to a written (symbolic) method. Content Scope: Knowledge and skills articulated in 3.NF.3b, 3.NF.3d	●Tasks may present realistic or quasi-realistic images of a contextual situation (e.g., a drawing of a partially filled graduated cylinder). However, tasks do not provide the sort of abstract drawings that help the student to represent the situation mathematically (e.g., a number line diagram or other visual fraction model). ●Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8. ●For fractions equal to a whole number, values are limited to 0 through 5.	MP.3, MP.5, MP.6
3.C.3-2 Base explanations/reasoning on concrete referents such as diagrams (whether provided in the prompt or constructed by the student in her response). Content Scope: Knowledge and skills articulated in 3.MD.5, 3.MD.6, 3.MD.7	Tasks may include those with and without real-world contexts. ii) Tasks with a context may present realistic or quasi-realistic images of a contextual situation (e.g., a drawing of a meadow). However, tasks do not provide the sort of abstract drawings that help the student to represent the situation mathematically (e.g., a tiling of the meadow).	MP.3, MP.5, MP.6
3.C.4-1 Distinguish correct explanation/reasoning from that which is flawed, and – if there is a flaw in the argument – present corrected reasoning.(For example, some flawed 'student' reasoning is presented and the task is to correct and improve it.)	●Students need not use technical terms such as commutative, associative, distributive, or property. ●Products and related quotients are limited to the 10x10 multiplication table	MP.3, MP.6, MP.7
3.C.4-2 Distinguish correct explanation/reasoning from that which is flawed, and – if there is a flaw in the argument – present corrected reasoning. (For example, some flawed 'student' reasoning is presented and the task is to correct and improve it.) Content Scope: Knowledge and skills articulated in 3.OA.6	●Products and related quotients are limited to the 10x10 multiplication table	MP.3, MP.6
3.C.4-3 Distinguish correct explanation/reasoning from that which is flawed, and – if there is a flaw in the argument – present corrected reasoning. (For example, some flawed 'student' reasoning is presented and the task is to correct and improve it.) Content Scope: Knowledge and skills articulated in 3.OA.8	●Tasks do not require a student to write a single equation with a letter standing for the unknown quantity in a two-step problem, and then solve that equation. ●Tasks may require students to write an equation as part of their work to find a solution, but students are not required to use a letter for the unknown. ●Addition, subtraction, multiplication and division situations in these problems may involve any of the basic situation types with unknowns in various positions.	MP.3, MP.5, MP.6
3.C.4-4 Distinguish correct explanation/reasoning from that which is flawed, and – if there is a flaw in the argument – present corrected reasoning. (For example, some flawed 'student' reasoning is presented and the task is to correct and improve it.) Content Scope: Knowledge and skills articulated in 3.NF.3b, 3.NF.3d	●Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8. ●For fractions equal to a whole number, values are limited to 0 through 5.	MP.3, MP.5, MP.6

3.C.4-5 Distinguish correct explanation/reasoning from that which is flawed, and – if there is a flaw in the argument – present corrected reasoning. (For example, some flawed 'student' reasoning is presented and the task is to correct and improve it.) Content Scope: Knowledge and skills articulated in 3.MD.7	●Tasks may include those with and without real-world contexts.	MP.3, MP.5, MP.6
3.C.4-6 Distinguish correct explanation/reasoning from that which is flawed, and – if there is a flaw in the argument – present corrected reasoning. (For example, some flawed 'student' reasoning is presented and the task is to correct and improve it.) Content Scope: Knowledge and skills articulated in 3.OA.9		MP.3, MP.6, MP.8
3.C.4-7 Distinguish correct explanation/reasoning from that which is flawed, and – if there is a flaw in the argument – present corrected reasoning. (For example, some flawed 'student' reasoning is presented and the task is to correct and improve it.) Content Scope: Knowledge and skills articulated in 2.NBT	●Tasks may have scaffolding1, if necessary, in order to yield a degree of difficulty appropriate to Grade 3.	MP.3, MP.6
3.C.5-1 Present solutions to two-step problems in the form of valid chains of reasoning, using symbols such as equals signs appropriately (for example, rubrics award less than full credit for the presence of nonsense statements such as 1 + 4 = 5 + 7 = 12, even if the final answer is correct), or identify or describe errors in solutions to two-step problems and present corrected solutions. Content Scope: Knowledge and skills articulated in 3.OA.8	●Tasks do not require a student to write a single equation with a letter standing for the unknown quantity in a two-step problem, and then solve that equation. ●Tasks may require students to write an equation as part of their work to find a solution, but students are not required to use a letter for the unknown. ●Addition, subtraction, multiplication and division situations in these problems may involve any of the basic situation types with unknowns in various positions.	MP.2, MP.3, MP.5, MP.6
3.C.5-2 Present solutions to multi-step problems in the form of valid chains of reasoning, using symbols such as equals signs appropriately (for example, rubrics award less than full credit for the presence of nonsense statements such as 1 + 4 = 5 + 7 = 12, even if the final answer is correct), or identify or describe errors in solutions to multi-step problems and present corrected solutions. Content Scope: Knowledge and skills articulated in 3.MD.7b, 3.MD.7d	●Tasks may include those with and without real-world contexts. ●Multi-step problems have at least 3 steps.	MP.2, MP.3, MP.5, MP.6
3.C.6-1 Base explanations/reasoning on a number line diagram (whether provided in the prompt or constructed by the student in her response) Content scope: Knowledge and skills articulated in 3.NF.2	●Tasks are limited to fractions with denominators 2, 3, 4, 6, and 8. ●Fractions equivalent to whole numbers are limited to 0 through 5.	MP.3, MP.5, MP.6
3.C.6-2 Base explanations/reasoning on a number line diagram (whether provided in the prompt or constructed by the student in her response) Content scope: Knowledge and skills articulated in 3.MD.1		MP.3, MP.5, MP.6